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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,331	04/13/2004	Bruce G. Aitken	SP03-049A	4504

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CORNING INCORPORATED
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EXAMINER	
WILLIAMS, JOSEPH L	
ART UNIT	PAPER NUMBER
2879	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/823,331	AITKEN ET AL.	
	Examiner	Art Unit	
	Joseph L. Williams	2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 November 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *11-25 and 37-50* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11-19,21,22,25,37-48 and 50* is/are rejected.

7)☒ Claim(s) *20,23,24 and 49* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/06,10/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 11/27/2006 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 14, 15, 17, 18, 21, 22, and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Asahara et al. (US 3,885,974), of record by Applicant.

Regarding claim 1, Asahara ('974) teaches in column 1, line 10 through column 3, line 45, 11 a method for manufacturing a hermetically sealed glass package, the method comprising the steps of: providing a first glass plate (not shown); providing a second glass plate (not shown); depositing a frit made from glass doped with at least one transition metal and a coefficient of thermal expansion (CTE) lowering filler (read aluminum oxide) onto said second glass plate; and heating said frit with an irradiation

source (read laser) in a manner that would cause said frit to soften (column 1, lines 29-32) and form a hermetic seal which connects said first glass plate to said second glass plate.

Regarding claim 14, Asahara ('974) teaches the heating step further includes using a laser to emit a laser beam that heats said frit.

Regarding claim 15, Asahara ('974) teaches frit has an enhanced absorption property within an infrared region and said laser beam has a wavelength in the infrared region such that when said laser beam interacts with the frit substantially more heat energy is absorbed by said frit from said laser beam when compared to the heat energy absorbed by each of said first and second glass plates.

Regarding claim 17, Asahara ('974) teaches the frit has an enhanced absorption property within an infrared region and said light has a wavelength in the infrared region such that when said light interacts with said frit substantially more heat energy is absorbed by said frit from said light when compared to the heat energy absorbed by each of said first and second glass plates.

Regarding claim 18, Asahara ('974) teaches frit has a softening temperature that is lower than softening temperatures of said first and second glass plates.

Regarding claim ~~17~~ 21 JW, Asahara ('974) teaches the CTE lowering filler is an additive filler including lithium alumino-silicate compounds.

Regarding claim ~~18~~ 22 ~~15~~ JW, Asahara ('974) teaches the frit is a low temperature glass frit containing one or more absorbing ions chosen from the group including iron, copper, vanadium, and neodymium.

Regarding claim 25, Asahara ('974) teaches the frit is selected from the group of glasses consisting of a titano-vanadium glass, an iron-vanadium glass, a zinc-vanadium glass, a Sn-Zn-phosphate glass, a mixed alkali zinc-phosphate glass, a vanadium-phosphate glass, a Pb-borate glass, and a mixed alkali zinc-phosphate glass with vanadium and lead.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Asahara et al. (US 3,885,974), of record by Applicant, in view of Pichler et al. (US 6,911,667).

Regarding claim 12, Asahara ('974) teaches all of the claimed limitations except for the step of placing an adhesive within a gap located between outer edges of said first and second glass plates, wherein said gap is caused by the presence of the hermetic seal.

Further regarding claim 12, Pichler ('667) teaches in column 1, lines 14-24, a glass encapsulated device comprised of, in part, the step of placing an adhesive (read epoxy) within a gap located between outer edges of said first and second glass plates, wherein the gap is caused by the presence of the hermetic seal, for the purpose of improving the durability of the device.

Hence, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the epoxy of Pichler in the glass package of Asahara for the purpose of improving the durability of the device.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Asahara et al. (US 3,885,974), of record by Applicant, in view of Komatsu (US 5,192,240).

Regarding claim 13, Asahara ('974) teaches all of the claimed limitations except for the step of pre-sintering the frit to the second glass plate before the heating step.

Further regarding claim 13, Komatsu ('240) teaches a glass encapsulated device comprised of, in part, pre-sintering the frit for the purpose of improving the durability of the device.

Hence, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the pre-sintering of Komatsu in the glass package of Asahara for the purpose of improving the durability of the device.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Asahara et al. (US 3,885,974), of record by Applicant, in view of Rottmiller (US 3,614,825).

Regarding claim 16, Asahara ('974) teaches all of the claimed limitations except for the use of an infrared lamp to emit light that heats the frit.

Further regarding claim 16, Rottmiller ('825) teaches a glass encapsulated device comprised of, in part, using an infrared lamp to emit light that heats the frit for the purpose of effectively sealing the device.

Hence, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the infrared lamp of Rottmiller in place of the laser of Asahara for the purpose of effectively sealing the device.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Asahara et al. (US 3,885,974), of record by Applicant, in view of Francis et al. (US 5,281,560).

Regarding claim 19, Asahara ('974) teaches all of the claimed limitations except for the frit having a CTE that matches the CTE of the glass plates.

Further regarding claim 19, Francis ('560) teaches the frit having a CTE that matches the glass plate for the purpose of providing low residual strain in the seal.

Hence, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the CTE matching of Francis in place of the frit of Asahara for the purpose of providing low residual strain in the seal.

Claims 37, 38, 40-42, 47, 48, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asahara et al. (US 3,885,974), of record by Applicant, in view of Pichler et al. (US 6,911,667).

Regarding claims 37 and 38, Asahara ('974) teaches all of the claimed limitations except for the organic light emitting diode and the step of placing an adhesive within a gap located between outer edges of said first and second glass plates, wherein said gap is caused by the presence of the hermetic seal.

Further regarding claims 37 and 38, Pichler ('667) teaches in column 1, lines 14-24, a glass encapsulated light emitting diode comprised of, in part, the step of placing an adhesive (read epoxy) within a gap located between outer edges of said first and second glass plates, wherein the gap is caused by the presence of the hermetic seal, for the purpose of improving the durability of the device.

Hence, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the epoxy of Pichler in the glass package of Asahara for the purpose of improving the durability of the device.

Regarding claim 40, Asahara ('974) teaches heating step is performed at a temperature which causes said frit to melt and form the hermetic seal while at the same time avoiding damage to said at least one organic light emitting diode.

Regarding claim 41, Asahara ('974) teaches heating step further includes using a laser to emit a laser beam that heats said frit.

Regarding claim 42, Asahara ('974) teaches frit has an enhanced absorption property within an infrared region and said laser beam has a wavelength in the infrared region such that when said laser beam interacts with said frit substantially more heat energy is absorbed by said frit from said laser beam when compared to the heat energy absorbed by each of said first and second substrate plates.

Regarding claim 47, Asahara ('974) teaches the CTE lowering filler is an additive filler.

Regarding claim 48, Asahara ('974) teaches the frit is a low temperature glass frit containing one or more absorbing ions chosen from the group including iron, copper, vanadium, and neodymium.

Regarding claim 50, Asahara ('974) teaches the frit is selected from the group of glasses consisting of a titano-vanadium glass, an iron-vanadium glass, a zinc-vanadium glass, a Sn-Zn-phosphate glass, a mixed alkali zinc-phosphate glass, a vanadium-phosphate glass, a Pb-borate glass, and a mixed alkali zinc-phosphate glass with vanadium and lead.

Claim 43-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asahara et al. (US 3,885,974), of record by Applicant, in view of Pichler et al. (US 6,911,667) and Rottmiller (US 3,614,825).

Regarding claim 43, Asahara ('974) in view of Pichler ('667) teaches all of the claimed limitations except for the use of an infrared lamp to emit light that heats the frit.

Further regarding claim 43, Rottmiller ('825) teaches a glass encapsulated device comprised of, in part, using an infrared lamp to emit light that heats the frit for the purpose of effectively sealing the device.

Hence, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the infrared lamp of Rottmiller in place of the laser of Asahara and Pichler for the purpose of effectively sealing the device.

Regarding claim 44, Asahara ('974) teaches the frit has an enhanced absorption property within an infrared region and said light has a wavelength in the infrared region such that when said light interacts with said frit substantially more heat energy is absorbed by said frit from said light when compared to the heat energy absorbed by each of said first and second glass plates.

Regarding claim 45, Asahara ('974) teaches frit has a softening temperature that is lower than softening temperatures of said first and second glass plates.

Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Asahara et al. (US 3,885,974), of record by Applicant, in view of Pichler et al. (US 6,911,667) and Komatsu (US 5,192,240).

Regarding claim 39, Asahara ('974) in view of Pichler teaches all of the claimed limitations except for the step of pre-sintering the frit to the second glass plate before the heating step.

Further regarding claim 39, Komatsu ('240) teaches a glass encapsulated device comprised of, in part, pre-sintering the frit for the purpose of improving the durability of the device.

Hence, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the pre-sintering of Komatsu in the glass package of Asahara and Pichler for the purpose of improving the durability of the device.

Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Asahara et al. (US 3,885,974), of record by Applicant, in view of Pichler et al. (US 6,911,667) and Francis et al. (US 5,281,560).

Regarding claim 46, Asahara ('974) and Pichler ('667) teach all of the claimed limitations except for the frit having a CTE that matches the CTE of the glass plates.

Further regarding claim 46, Francis ('560) teaches the frit having a CTE that matches the glass plate for the purpose of providing low residual strain in the seal.

Hence, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the CTE matching of Francis in place of the frit of Asahara and Pichler for the purpose of providing low residual strain in the seal.

Allowable Subject Matter

4. Claims 20, 23, 24, and 49 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Regarding claim 20, the prior art of record neither shows nor suggest a frit comprised of, in part, the CTE lowering filter being an inversion filter, along with the rest of the limitations of the claim.

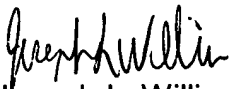
Regarding claims 23, 24, and 49, the prior art of record neither shows nor suggests a frit comprised of, in part, the claimed chemical compounds, along with the rest of the limitations of the claim.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph L. Williams whose telephone number is (571) 272-2465. The examiner can normally be reached on M-F (6:30 AM-3:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Joseph L. Williams
Primary Examiner
Art Unit 2879